UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest Region
7600 Sand Point Way N.E., Bldg. 1
BIN C15700
Seattle, WA 98115-0070

March 15, 2002

Michael Kublacki
Federal Highway Administration
Evergreen Plaza Building
711 S. Capitol Way
Olympia, Washington 98501

Re: Endangered Species Act Section 7 Formal Consultation on McInroes Bridge Replacement and Magnuson-Stevens Fishery Conservation and Management Act Consultation (NMFS No. WSB-01-372).

Dear Mr. Kublacki:

The attached document transmits the National Marine Fisheries Service's (NMFS) Biological Opinion (BO) on the proposed McInroes Bridge Replacement in accordance with section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*). The Federal Highway Administration (FHWA) had determined that the proposed actions are likely to adversely affect the Middle Columbia River (MCR) steelhead (*Oncorhynchus mykiss*) Evolutionary Significant Units (ESU). Formal consultation was initiated on August 8, 2001.

This BO reflects formal consultation and an analysis of effects covering the MCR steelhead in Dry Creek, Walla Walla County, Washington. This BO is based on information provided in the Biological Assessment sent to NMFS by the FHWA and additional information transmitted via telephone conversations, mail, and e-mail with the project applicant. A complete administrative record of this consultation is on file at the Washington State Branch Office.

The NMFS concluded that the proposed action is not likely to jeopardize the continued existence of MCR steelhead, or destroy or adversely modify designated critical habitat. As required by Section 7 of the ESA, NMFS has included reasonable and prudent measures with nondiscretionary terms and conditions that NMFS believes are necessary to minimize the impact of incidental take associated with this action.

This Opinion also serves as consultation on Essential Fish Habitat pursuant to section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act and implementing regulations at 50 CFR Part 600.

If you have any questions regarding this consultation, please contact Joel Moribe of the Washington State Habitat Branch Office at (206) 526-4359.

Sincerely,

Russell M Strach for

D. Robert Lohn
Regional Administrator

cc: David Eids, Walla Walla County
LeeAnn Hancock, WSDOT
Brian Hasselbach, WSDOT
Roger Arms, WSDOT
Paul Wagner, WSDOT

Endangered Species Act - Section 7 Consultation

Biological Opinion

And

Magnuson-Stevens Fishery Conservation and Management Act

McInroes Bridge Replacement
Walla Walla County, Washington
WSB-01-372

Agency: Federal Highway Administration

Consultation Conducted By: National Marine Fisheries Service,
Northwest Region

Issued by: Russell M Strach for Date: 03/15/2002

D. Robert Lohn
Regional Administrator

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1.0 INTRODUCTION

This document transmits the National Marine Fisheries Service's (NMFS) Biological Opinion (BO) and Essential Fish Habitat consultation based on our review of a project to replace the McInroes Bridge in Walla Walla County, Washington. McInroes Bridge crosses Dry Creek, a tributary to Walla Walla River, which is a tributary to the Columbia River and is located in the Mid-Columbia River (MCR) evolutionary significant unit (ESU). Dry Creek is also essential fish habitat for chinook salmon.

1.1 Background Information

The Federal Highway Administration (FHWA) concluded that the project proposed by the lead agency (Walla Walla County Public Works Department) was likely to adversely affect MCR steelhead (*Oncorhynchus mykiss*) and their designated critical habitats. The existing bridge is dilapidated and sub-standard for existing traffic and water flow conditions. The proposed replacement will upgrade the bridge to county highway standards and structural capacity. In addition, the new bridge will have a longer span and is designed to reduce an existing constriction of the stream channel at the project site.

1.2 Consultation History

The document is based on information provided in the Biological Assessment (BA) and the following written correspondence: On August 8, 2001, the NMFS received a letter initiating formal consultation (dated August 8, 2001) from the FHWA. On August 16, 2001, NMFS received a biological assessment (BA) describing the project from Washington State Department of Transportation (WSDOT). On October 10, 2001, NMFS sent a letter to FHWA requesting additional information regarding the proposed project. On October 10, 2001, the FHWA sent NMFS requested initiation of formal section 7 consultation. On October 25, 2001, NMFS received additional information regarding details of the Hydraulic Project Approval (HPA), fish capture, dewatering, duration of diverted channel, and details on bank stabilization and stream flow redirection. Information necessary to conduct formal consultation was assembled by November 21, 2001.

Additionally, numerous telephone conversations and e-mail correspondence between NMFS staff, WDFW, Walla Walla County, WSDOT and FHWA are included in the administrative record.

1.3 Description of the Proposed Action

The FHWA proposes to fund, in whole or in part, a series of construction projects to be constructed by Walla Walla County. The Walla Walla County Public Works Department proposes to replace the McInroes Bridge which is the Middle Waitsburg Road overcrossing of Dry Creek in Walla Walla County, Washington. The existing 40 foot by 22-foot wide single span concrete bridge will be demolished and replaced by an 80 foot by 35-foot wide concrete superstructure bridge in the same location as the existing bridge.

1.3.1 Diversion of River and Removal of Fish

It is necessary to divert water to bypass the project area during removal and construction of the bridge. A temporary bypass will be constructed along the north side of the existing bridge. The temporary bypass will consist of excavating a temporary ditch with a 3 foot bottom width and 180 feet in length (Hancock 2001a). The ditch will be lined with pond liner material to control the full flow and prevent construction sediments from contacting the surface water. A series of silt fences and hay bales will also be deployed to minimize construction sediments from contaminating surface water. The entire stream flow will be diverted from the project area and construction will be entirely in the dry. The duration of the bypass will be no more than 60 working days or 84 calendar days and will be between July 15 - September 30.

Any salmonids in the dewatered area would be captured and transported to free-flowing water. Capture and transport of salmonids would begin immediately after the installation of the upstream revetment and last until all salmonids are removed. Fish rescues will be performed by a trained fish biologist and with the assistance of a WDFW fish biologist.

1.3.2 Demolition of Existing Bridge

After the diversion is in place, the existing bridge will be demolished using cranes and other heavy equipment. No blasting is required for demolition. When groundwater is present during excavation, the contractor will excavate inside coffer dams, caissons, or other approved measures to isolate sediment from surface water. To minimize the environmental effects of this process, the contractor will break the concrete bridge in as few pieces as possible and remove them from the site. The existing bridge is brittle and is likely to crumble in many places resulting in numerous fragments which will fall into the dewatered area. The abutments on both sides of the river will not be entirely removed, but broken and removed about one foot below the stream bed, leaving an unknown amount of concrete material below grade. Concrete debris will be hauled off site and disposed at in an approved site.

1.3.3 Construction of Bridge

The new bridge will be a single span bridge with abutments on each bank. All portions of the bridge will be constructed in the dry within the dewatered area.

Prior to the construction of the new bridge, Walla Walla County proposes to excavate the existing stream bank from the toe of the existing abutments and continue to the location of the two new abutments. The excavation is necessary to install the new abutments set back further from the existing banks. Excavation will be limited to what is necessary to install the new abutments. After the bank is excavated, the south abutment will be installed. Once in place and the concrete is cured, the southern bank will be regraded. Riprap and other bank stabilization structures on the south bank will be installed. The disturbed bank will be covered with a coconut fiber blanket and revegetated to prevent erosion. A porous rock weir will be installed within the stream bed approximately 70 feet upstream of the bridge. The weir will consist of a series of 1.5 to 2-foot diameter rocks arranged in a V-shaped formation pointing upstream. The weir will be installed using cranes and is designed to straighten the flow of the stream and direct it through the bridge. The weir incidentally creates pool habitat that steelhead could use.

At this point, the contractor will redirect the surface water from the channel bypass back to Dry Creek. The hay bales on the downstream end of the dewatered area will be kept in place when the water is returned to Dry Creek. This will minimize the extent of loose sediments that are carried during the first flush of water reentering the creek. Once sediments have settled, the contractor will remove the hay bales. After the creek is reestablished, the contractor will construct the north abutment, regrade the north bank, and revegetate the disturbed areas. Banks will be graded at a 2:1 (horizontal:vertical) slope to the top of the bank or wingwalls. Once both abutments are complete and the girders are in place, the cast-in-place deck will be poured from the roadway. Best management practices such as the use of tarps or diapers will be used to isolate wet concrete from entering surface water.

1.3.4 Construction of Stormwater Facilities

Presently, there is no stormwater treatment provided for the existing roadway and bridge. The County proposes to minimize effects of the added impervious surface by constructing catch basins and roadside detention basins to treat and detain stormwater generated from the new and existing impervious surfaces within the action area. Catch basins were sized based on the amount of stormwater generated by a storm equal to the 25 year/24 hour storm event. Both water quality and water quantity will be treated.

1.3.5 Removal and Planting of Vegetation

Riparian vegetation will be removed during construction of the bridge, roadway, and stormwater facilities. The vegetation in the action area has been affected by agricultural practices. As a result, most of the riparian vegetation in the action area is limited to a single row of trees along the banks. Large trees are often limited to the southern (north facing) bank. Approximately ten trees will be removed within the project area. Affected riparian areas will be replanted at a 3:1 ratio (trees replanted to trees removed) with native trees. All plantings described in the BA and mutually agreed upon in this BO shall survive after three years or will be replaced during that time frame. It is the responsibility of the action agency to ensure monitoring and replacement of trees as needed.

1.3.6 Phases of Construction

Construction is expected to take up to six months, from July through December. In-water work will occur between July 15 and September 30. Work will occur only during daylight hours. Staging and pre-construction preparation will commence prior to the approved start date. On the approved start date or later, the channel will be diverted into the channel bypass and the dewatered work area will be created. The bridge will then be removed and the abutments, bank stabilization, revetments, and vegetation on the banks will be installed. At this point, the channel bypass will then be removed, returning the river to its channel. The stream must be returned to its natural channel by September 30 or when adult MCR steelhead begin migrating through the action area. Work after September 30 or the end of the approved in-water work window will be limited to the construction of the deck, installation of new beam guardrails, construction of stormwater treatment facilities, and other out-of-water construction activities.

1.4 Description of the Action Area

The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action. [50 CFR §402.02]

The action area is defined as the stream channel which includes the water, and land (including submerged land) from approximately 250 feet upstream of the existing McInroes Bridge to approximately 300 river feet below the McInroes Bridge. The action area also includes the adjacent riparian zone within the construction area and all areas affected by the project including the staging area, catch basins, detention ponds, and roadways.

2.0 ENDANGERED SPECIES ACT

2.1 Biological Opinion

2.1.1 Status of Species and Critical Habitat

2.1.1.1 Middle Columbia River Steelhead

Middle Columbia River steelhead were listed as threatened under the ESA on March 25, 1999 (64 Fed. Reg. 14517). Critical habitat for steelhead was designated on February 16, 2000 (65 Fed Reg. 7764). In Washington, the MCR steelhead ESU includes winter and summer steelhead in tributaries to the Columbia River above the Wind River upstream to include the Yakima River (Busby *et al*. 1996). Steelhead of the Snake River Basin are not included.

Six stocks of steelhead within the MCR ESU were identified as at risk of extinction or of special concern (Nehlsen *et al*. 1991). The Walla Walla River stock was identified as of special concern. There are several factors for decline of MCR steelhead including habitat degradation through grazing and water diversion, overharvest, predation, hydroelectric dams, hatchery introgression, drought and other natural or human-induced factors (Busby *et al*. 1996). Estimates of historical, pre-1960s abundance for the MCR ESU are available for the Yakima River only. The estimated pre-1960 run size is 100,000 (WDFW *et al*. 1993). If we assume that other basins had comparable run sizes for their drainage areas, the total historical run size for this ESU might have been in excess of 300,000. The most recent 5-year average run size (1989-

1993) was 142,000 with a naturally produced component of 39,000. These data indicate that hatchery fish represent approximately 75% of the total escapement for this ESU (Busby *et al*. 1996). The current natural run size for the MCR ESU might be less than 15% of estimated historical levels.

Steelhead are still found throughout much of their historic range in the Walla Walla River basin, though populations have declined. Accurate historic estimates of steelhead returns to the Walla Walla River Basin do not exist, but the run size is believed to have been 4,000 to 5,000 fish (Oregon Department of Fish and Wildlife 1987), cited in Confederated Tribes of the Umatilla Indian Reservation *et al.* 1990). Long-term spawning ground surveys are not conducted on the Walla Walla River, so estimates are unavailable (WDFW *et al*. 1993). However, WDFW *et al*. (1993) identified the stock as depressed and Nehlson *et al.* 1991 identified it as of special concern.

Essential features of critical habitat for steelhead include adequate substrate, water quality, water quantity, water temperature, water velocity, cover/shelter, food, riparian vegetation, and safe passage conditions. Recent and historical information related to abundance and life history is summarized in Busby *et al*. (1996).

2.1.2 Evaluating the Proposed Action

The standards for determining jeopardy are set forth in Section 7(a)(2) of the ESA as defined by 50 CFR Part 402. The NMFS must determine whether the action is likely to jeopardize the listed species and/or whether the action is likely to destroy or adversely modify critical habitat. This analysis involves the initial steps of (1) defining the biological requirements of the listed species, and (2) evaluating the relevance of the environmental baseline to the species' current status.

Subsequently, NMFS evaluates whether the action is likely to jeopardize the listed species by determining if the species can be expected to survive with an adequate potential for recovery. In making this determination, NMFS must consider the estimated level of mortality attributed to: (1) collective effects of the proposed or continuing action, (2) the environmental baseline, and (3) any cumulative effects. This evaluation must take into account measures for survival and recovery specific to the listed salmon’s life stages that occur beyond the action area. NMFS must identify reasonable and prudent alternatives for the action if it is determined that the action will adversely modify critical habitat.

Furthermore, NMFS evaluates whether the action, directly or indirectly, is likely to destroy or adversely modify the listed species' critical habitat. The NMFS must determine whether habitat modifications appreciably diminish the value of critical habitat for both survival and recovery of the listed species. The NMFS identifies those effects of the action that impair the function of any essential element of critical habitat. The NMFS then considers whether such impairment appreciably diminishes the habitat’s value for the species’ survival and recovery. If NMFS concludes that the action will adversely modify critical habitat it must identify any reasonable and prudent alternatives available.

2.1.2.1 Biological Requirements

The relevant biological requirements are those necessary for MCR steelhead to survive and recover to naturally reproducing population levels at which time protection under the ESA would become unnecessary. Adequate population levels must safeguard the genetic diversity of the listed stock, enhance their capacity to adapt to various environmental conditions, and allow them to become self-sustaining in the natural environment.

Biological requirements are defined as properly functioning conditions (PFC) of habitat conditions that are relevant to any steelhead life stage. These habitat conditions include all parameters of the matrix of pathways and indicators (MPI) described in NMFS (1996), e.g., water quality, habitat access, flow/hydrology, and riparian reserves.

Information related to biological requirements for MCR steelhead can be found in Busby *et al*. (1996). Presently, the biological requirements of listed species are not being met under the environmental baseline. As a general matter, to improve the status of the listed species, improvements in the functional condition of designated critical habitat are needed.

2.1.2.2 Environmental Baseline

The environmental baseline represents the current set of basal conditions to which the effects of the proposed action are then added. Environmental baseline is defined as "the past and present impacts of all Federal, State, and private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or informal section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation process" (50 C.F.R 402.02). The term "action area" is defined as "all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action."

The proposed project is located in the Walla Walla River watershed in Walla Walla County, Washington. The Walla Walla River is a tributary to the Columbia River system. The watershed drains an area of approximately 1,758 square miles with headwaters in the Blue Mountains and the Palouse hills within Washington and Oregon. The project area is located in Dry Creek, which joins the Walla Walla mainstem at about river mile (RM) 29.4. McInroes Bridge is approximately 17 RM upstream of its confluence with Walla Walla River. The action area provides a migration corridor and some rearing for most of the MCR steelhead that spawn in Dry Creek. The Dry Creek drainage area is approximately 35 square miles and is approximately 35 miles long (Hancock 2001a).

The Dry Creek system is dominated by agricultural land use. At present, the surface waters throughout the subbasin are characterized as lacking large woody debris (LWD), generally narrow riparian zones, low summer stream flows exacerbated by surface water withdrawals, high water temperatures, heavily silted with fine sediments, and many stream reaches have been altered by diking and/or channelization (Kuttel 2001). Dry Creek has been subjected to severe downcutting and channel incision. Some areas along Dry Creek are highly unstable and have downcut 40 to 50 feet below the old floodplain (Reckendorf 2000).

Agricultural lands comprise 58% of the watershed, while forest land and range land cover 25% and 17% respectively (U.S. Army Corps of Engineers 1997). Agricultural activities have seriously degraded salmonid habitat in many areas of the watershed. Practices such as farming to the edge of streams, removing riparian vegetation, filling off-channel areas, diking and channelization, allowing livestock full access to streams, conversion of native perennial vegetation to annual crops, and irrigation have all played roles in habitat degradation (Bureau of Reclamation 1997; U.S. Army Corps of Engineers 1997; Mendel *et al.* 1999; Saul *et al.* 2000). Water diversions and withdrawals appear to be the major limiting factor throughout the subbasin causing to low stream flows and fish kills. The Washington Department of Fish and Wildlife (WDFW) estimates that less than 10% of surface water diversions in the Washington portion of the basin meet state or federal juvenile fish screening criteria (Kuttel 2001). Bireley (2000) reported that over 75% of the diversions identified in the Cooperative Compliance Review Program (CCRP) are located in streams utilized for salmonid spawning, rearing, and migration. The high incidence of non-compliant surface water diversions is a serious threat to federally listed juvenile salmonids. Furthermore, it is likely that the diversions identified in the CCRP may represent only 50% to 60% of surface water diversions currently in use in the Washington portion of the basin. At least 21 irrigation diversions on Dry Creek are known to be in use.

2.1.2.3 Status of the Species within the Action Area

2.1.2.3.1 Steelhead

Currently steelhead are the only anadromous salmonids that spawn in the Walla Walla River system (CTUIR 1996; in Columbia River Inter-Tribal Fish Commission 2001). Accurate historic estimates of steelhead returns to the Walla Walla River Basin do not exist, but the run size is believed to have been 4,000 to 5,000 fish (Oregon Department of Fish and Wildlife 1987), cited in Kuttel 2001). Presently steelhead are found in the Walla Walla River including the North and South Forks and several of their tributaries, Mill Creek and several of its tributaries, Dry Creek, and the Touchet River including the North and South Forks, Wolf Fork, Robinson Fork, Spangler Creek, Lewis Creek, Jim Creek, Patit Creek, and Coppei Creek (Germond, J. 2000b Personal Communication; Mendel, G. 2000 Personal Communication; Northrop, M. 2000 Personal Communication; Volkman, J. 2000 Personal Communication), cited in Kuttel 2001).

The areas immediately above and below the project site provide rearing habitat. The reach is a migratory corridor for steelhead that spawn upstream from the project site. The Washington Department of Fish and Wildlife (WDFW) plants marked hatchery steelhead in the Touchet River at Dayton and the Walla Walla River below Mill Creek to provide sportfishing opportunities (Mendel, G. 2001 Personal Communication), in Kuttel 2001). There is no direct commercial fishery on this stock although incidental catch of wild steelhead occurs in the Columbia River. The Cayuse, Walla Walla, and Umatillas, collectively are known as the

Confederated Tribes of the Umatilla Indian Reservation (CTUIR), may also harvest this stock at unknown numbers.

Steelhead begin entering the Walla Walla system as early as September or October, but if necessary they will hold for long periods of time until conditions are favorable for migration (Bjornn and Reiser 1991). Peak adult migration occurs in early November but migration timing may vary from year to year depending on weather or flow conditions. Most of the spawning in the Walla Walla River system occurs near the headwaters where there is adequate riparian vegetation, cold water temperatures, and clean gravel. The action area currently does not provide these functions and spawning has not been documented in the action area. ODFW and WDFW monitor spawner escapement for the Walla Walla stock but estimates are imprecise due to partial sampling. Nonetheless, the steelhead stock in the Walla Walla is classified as depressed (WDFW *et al*. 1993). CTUIR (1990) set an objective for a return of 11,000 of which 3,000 would be naturally produced and 7,680 would be for harvest. Steelhead eggs may incubate for 1.5 to 4 months before hatching depending on water temperature (61 Fed. Reg. 41542; August 9, 1996). Bjornn and Reiser (1991) noted that steelhead eggs incubate about 85 days at 4˚C and 26 days at 12˚C to reach 50% hatch. Nickelson *et al*. (1992) stated that steelhead eggs hatch in 35 to 50 days depending upon water temperature.

The action area lacks habitat complexity. A single-file row of mature trees exists on the banks upstream and downstream of McInroes Bridge. Dry Creek lacks large woody debris in the area. Several trees on the south bank downstream from the bridge are being under cut by existing flow where roots are exposed in the water. The banks on both sides of the creek are steep and highly unstable and broken concrete, rocks, and other man made objects are common on banks within the action area.

2.1.2.4 Factors Affecting Species Environment within Action Area

The action area is surrounded by agricultural land. This has been the case throughout the Lower Walla Walla subbasin since the early 1800's. Generally, baseline conditions in the Walla Walla subbasin are degraded and in the action area, none of the habitat indicators are properly functioning. The three most limiting factors are water quantity, water quality, and habitat conditions (NMFS 2000).

Legal and illegal water withdrawals for irrigation have significantly reduced water quantity in the river and its tributaries. The stream channel within the action area, along with many other parts of the river is characterized by a lack of off-channel habitat, few wetlands, and stream flow regimes with high winter peaks and low summer flows (and associated high temperatures). Dry Creek has had average flows of 1.4 cubic feet per second and has been recorded as low as 0.1 cfs in August from 1949-1967 (USGS 1985). Narrow, incised channels and flat gradients and low flows has created many areas within the reach that can cause isolated pools and stagnant conditions. Off-channel habitat is nearly non-existent along the reach because of the severe incisions throughout the reach (Mendel, pers. comm. 2000 in Kuttel 2001).

Some sections in the Lower Walla Walla subbasin, including Dry Creek have been designated as water quality limited under Section 303(d) of the Clean Water Act because of temperature and pollution. As of 1984, 252,000 tons/yr fine sediment were delivered from cropland to streams in the Dry Creek Basin. For comparison, forestlands delivered 354 tons/yr (USDA SCS *et al*. 1984). Water temperatures can reach 74 F or more in summer months near the project area (Grandstaff, pers. comm. 2001; Bambrick, pers. comm. 2001; Hancock 2001).

The river banks in the action area are steep and unstable and support only isolated, narrow strips of riparian vegetation. Streambank conditions and floodplain connectivity in the action area are degraded by bank armoring, levees, channelization, and other flood control measures. Agricultural practices have impacted riparian buffers. Buffer widths are narrow and vegetation is mostly immature. The abundance of LWD is extremely low and recruitment of LWD is poor. Roads, urban and rural development, and agricultural land uses have altered channel dynamics and hydrology in the basin (NMFS 2000).

2.1.3 Effects Of the Proposed Action

The proposed replacement of the McInroes Bridge is likely to adversely affect MCR steelhead as determined by the FHWA. The portions of Walla Walla River that flow through the action area may support rearing areas for juvenile steelhead. The action area is within designated critical habitat for MCR steelhead.

The ESA implementing regulations define "effects of the action" as "the direct and indirect effects of an action on the species or critical habitat together with the effects of other activities that are interrelated or interdependent with that action, that will be added to the environmental baseline." Indirect effects are those that are caused by the proposed action, are later in time, but are still reasonably certain to occur (50 C.F.R 402.02).

The proposed bridge replaces an existing bridge with a design that slightly improves channel dynamics, water flow, and floodplain connectivity. As such, the primary adverse effects of the proposed project are the direct effects of the construction activities required to replace the existing bridge.

2.1.3.1 Direct Effects

Direct effects are the immediate effects of the project on the species or its habitat. Direct effects result from the agency action and include the effects of interrelated actions and interdependent actions. Future Federal actions that are not a direct effect of the action under consideration (and not included in the environmental baseline or treated as indirect effects) are not evaluated.

Juvenile and adult steelhead may inhabit the action area during the proposed construction periods. Generally, the direct effects are related to the extent and duration (14 to 15 weeks) of construction activities in or adjacent to Walla Walla River. The negative effects associated with the proposed project are likely to be short in duration and will be minimized through restrictions in timing of construction.

2.1.3.1.1 Diversion of Stream and Removal of Fish

The diversion of the river during construction may result in the incidental stranding of juvenile steelhead. Additionally, the diversion of water in the channel will impede movement of steelhead, preventing access to the dewatered area for 14 to 15 weeks. The temporary channel bypass will also be large enough and fitted to ensure fish passage during construction. The effects associated with dewatering will also be minimized by timing. During the work window, adult steelhead migration and spawning has been completed and outmigrating smolts are expected to have emigrated.

Diverting water will also cause the temporary loss (burial, dessication, and displacement) of macroinvertebrate habitat. Aquatic invertebrates serve as an important source of prey for salmonids, and the loss of aquatic invertebrate habitat may reduce foraging opportunities for listed salmonids. Effects associated with the disruption of the streambed is likely to be short-lived as new invertebrates tend to recolonize disturbed areas (Allan 1995).

A trained fish biologist or WDFW fish biologist will use dip nets, seine nets, or minnow traps to capture fish in the dewatered area. This handling has been shown to increase plasma levels of cortisol and glucose in fish (Hemre and Krogdahl 1996; Frisch and Anderson 2000). Considering the expected low flow in mid-July and the accessibility of the dewatered area, it is unlikely that electrofishing will be necessary. Electrofishing may result in direct mortality of young-of-the-year or juvenile steelhead. Physical injuries from electrofishing include internal hemorrhaging, spinal misalignment, or fractured vertebrae. The likelihood of injury or mortality will be reduced by using a qualified WDFW biologist that ensures safe capture, handling, and release of fish.

2.1.3.1.2 Water Quality

The expected negative effects associated with grading, excavation, the installation of dewatering barriers, culverts, and the back-filling and removal of the construction area include temporary increases in turbidity and sediment levels during construction. Short term negative effects include deposition of fine sediment that can significantly degrade instream spawning habitat and reduce survival of steelhead from egg to emergence (Phillips *et al*. 1975), sublethal effects from suspended sediments (e.g., elevated blood sugars and cough rates (Servizi and Martens 1992), physiological stress and reduced growth, loss of intergravel cover for fish from increased sediment levels (Spence *et al*. 1996), avoidance of suspended sediments by juvenile salmonids (Bisson and Bilby 1982; Servizi and Martens 1992), and elevated turbidity levels that can reduce the ability of salmonids to detect prey and can cause gill damage (Sigler 1980; Lloyd *et al*. 1987). Moderate turbidity levels (11 to 49 NTU's) also may cause juvenile steelhead and coho to leave rearing areas (Sigler *et al*. 1984). Additionally, short-term pulses of suspended sediment have been shown to influence territorial, gill-flaring, and feeding behavior of salmon under laboratory conditions (Berg and Northcote 1985). These negative effects will be minimized through recommended restrictions in timing of construction and the use of erosion control measures identified in the BA, which are captured in terms and conditions of this BO. It is expected that listed species present during construction will seek refugia or will avoid portions of stream with high turbidity and sediment levels. Overall, the increased turbidity and sediment are not expected to influence the environmental baseline over the long term.

2.1.3.1.3 Disturbance of Streambed

Excavation, removal of the existing bridge, placement of dewatering barriers, channel modification, removal of construction area, and back-filling will disturb the substrate of Walla Walla River. It is unlikely that the instream work will affect spawning habitat although instream work may harm fish by homogenizing the substrate and reducing the diversity of benthic habitat in the river bed. Additionally, the use of heavy equipment in the riparian areas and within the streambed may cause compaction of soils resulting in reduced infiltration at the project site. Such compacting decreases the stability of the banks, reduces recruitment of riparian vegetation, which results increases deposition of fine sediments into the river. To minimize the disturbance of riverbed, the contractor will stay within the dammed work area and designated access routes.

2.1.3.1.4 Removal of Riparian Vegetation

Riparian vegetation links terrestrial and aquatic ecosystems, influences channel processes, contributes organic debris to streams, stabilizes streambanks, and modifies water temperatures (Gregory *et al*. 1991). Removal of vegetation may result in increased water temperatures that would further degrade already impaired water temperatures in the action area. Elevated water temperatures may influence numerous attributes of salmonids including physiology, growth and development, life history patterns, disease, and competitive predator-prey interactions (Spence *et al*. 1996). Loss of vegetation also may reduce allochthonous inputs to the stream. Woody debris provides essential functions in streams including the formation of habitats. Additionally, the removal of vegetation decreases streambank stability and resistance to erosion.

Like most of the Lower Walla Walla subbasin, the action area exhibits poor riparian conditions (Kuttel 2001). The removal of existing trees may have a dramatic effect on the action area which already lacks properly functioning riparian forest. Replanting disturbed areas will improve riparian function in the action area. Road widening, bridge widening, and other added impervious surface will create a permanent loss of riparian habitat and will permanently preclude revegetation.

2.1.3.2 Indirect Effects

Indirect effects are caused by or result from the proposed action, are later in time, and are reasonably certain to occur. Indirect effects may occur outside of the area directly affected by the action. Indirect effects might include other Federal actions that have not undergone section 7 consultation but will result from the action under consideration. These actions must be reasonably certain to occur, or they are a logical extension of the proposed action.

2.1.3.2.1 Impervious Surface and Stormwater Facilities

There are several adverse effects associated with adding impervious surface such as roads to a watershed. Those adverse effects are described in further detail below. The extent to which steelhead detect adverse effects associated with impervious surfaces depends on several factors. Impervious surfaces do not directly affect steelhead but indirectly affect them by one or several of the following: degraded water quality, changes in water temperature, or changes in hydrology. As more impervious surface is added to the watershed, changes in water quality and hydrology are easily detected. Stormwater treatment facilities and other techniques can reduce those changes in water quality and quantity if they are designed with the project.

Although there are some city centers with high density road networks, most of the subbasin has few roads and low density road networks. The proposed road project will create 18,000 square feet of new impervious surface, which is a relatively small increase in the Lower Walla Walla River basin. The project will not add lanes to the road and does not increase the road network in the action area. The watershed is dominated by large open spaces with ample opportunity to restore vegetation within the watershed without using the newly paved areas.

The proposed project will avoid or minimize adverse changes in hydrology by creating stormwater treatment facilities designed to detain stormwater generated from the road improvement project. Stormwater detention will minimize disruption of the hydrology of the system, and remove pollutants and fine sediments from surface water. Detention basins will provide some infiltration where precipitation will percolate stormwater to groundwater. Infiltration will reduce elevated surface water temperatures and preserve the hydrology better than detention alone.

Impervious surfaces affect the watershed in several ways. The addition of impervious surface will result in increased stormwater runoff and alteration of existing drainage patterns in the action area. Such effects to hydrology typically include increased frequency and duration of peak flows and the presence of peak flows during periods when none previously existed. Increased impervious area also can shift the hydrologic regime from subsurface to surface runoff and may result in higher and more frequent peak flows even with small storms. Increased peak flows and increased frequency and duration of peak flows can adversely alter steelhead habitat through lateral erosion, bed scour, downcutting, bank de-stabilization, and removal of woody debris. In addition, increasing peak flows reduces groundwater recharge which in turn decreases base flows. Decreased base flow, may create migration barriers, strand fish in disconnected habitats, and increase stream temperatures.

Research indicates a negative relationship between impervious surface and water quality associated with stormwater runoff (Schueler 1984). In urban areas, roads act as conduits of runoff water and pollutants from impervious areas directly to streams. May *et al*. (1997)

discussed declines in biological integrity and habitat quantity and quality as the level of impervious surface area increased above 5%. Large rain storms and subsequent high flows can elevate total suspended solids, turbidity, and nutrient concentrations in urban watersheds. Additionally, chemical water quality generally declines as urbanization increases (May *et al*. 1997). Increased impervious surface also contributes to water temperature increases in streams (Schueler 1984). The addition of impervious surface to the watershed, including riparian areas, will also result in a permanent loss of opportunity for revegetation in the where those surfaces are added.

The Walla Walla subbasin, including the Dry Creek watershed, does not have a high density of road network and the proposed road widening will not increase the road network in the watershed. The proposed project will add impervious surface to the action area. Proposed detention ponds and other stormwater treatment facilities will appropriately minimize the described effects.

2.1.3.2.2 Changes in Fluvial Transport and Channel Morphology

The replacement of the existing bridge with a longer bridge will improve the fluvial transport of sediment and large woody debris, which is important in the formation of diverse habitats. The new bridge will also be 4.7 feet higher than the existing bridge and is expected to pass the 100 year flood. The new bridge will reduce the likelihood and the extent of catastrophic damage to aquatic habitat by lowering erosive velocities during peak floods.

The existing active channel is cutting into the existing south abutment and bank. In order to shift the existing channel to the north bank, Walla Walla County is planning to incorporate numerous bank stabilization techniques. Approximately 2,565 cubic feet of hardening (e.g., rocks, cement blocks, rebar) presently exists in the project area. While most of this hardening will be removed, Walla Walla County proposes placement of 6,480 cubic feet of riprap to reinforce the banks near the bridge.

The use of riprap (or quarry spawls or rocks) modifies the stream channel. Large scale addition of riprap prohibits lateral movement in the channel, thereby reducing undercut banks, natural meanders, creation of side channels and off-channel habitat (Schmetterling *et al*. 2000). Riprap can cause channel incision causing a variety of morphological changes including: floodplain abandonment, bank steepening and erosion, lowering of water table, changes in stream bank vegetation and change in stream substrate (Beschta and Platts 1986; Heede 1986 in Schmetterling *et al*. 2000). As a result, habitat diversity in the stream channel is severely reduced. Riprap reduces riparian vegetation along the banks which can reduce LWD recruitment (Ralph *et al*. 1994; Young *et al*. 1994; Fausch *et al*. 1995 in Schmetterling *et al*. 2001). Li *et al*. (1984) found lower sub-yearling and juvenile salmonid densities because of adverse microhabitat conditions created by large angular rock. Numerous studies have shown lower densities in juvenile salmonids in riprapped banks (Beamer and Henderson 1998; Peters *et al*. 1998; Knudsen and Dilley 1987; Thurow 1988).

Effects associated with riprap can be minimized by a number of ways. Incorporation of wood debris and root wads can diminish the adverse affects to channel velocity by adding roughness. Root wads can also promote some LWD recruitment and may create slow water environments that fish may use. The use of “turning rocks”, or rocks with a square or rectangular face angled into the flow, has been shown to create backwater eddies behind the rocks and in the spaces between the rocks. Such rocks can reduce the amount of riprap needed to force the flow away from banks or other structures that need protection from flowing water. By incorporating these two techniques in this project, the effects of riprap are minimized by creating slow flow conditions and LWD recruitment opportunities that rarely occur in riprapped banks.

Walla Walla County also proposes to straighten the flow of the stream through the bridge with the placement of a rock weir structure approximately 70 feet upstream of the bridge. The “porous weir structure” will be constructed with a series of rocks positioned perpendicular to the flow, arranged in a v-shape, pointing upstream. A row of footer rocks, approximately five 2-3" diameter, will be completely buried across the bank. A second row of approximately 6-8 rocks will be buried half way into the substrate and will be arranged in a staggered position to the footer rocks. The weir is designed to create a cascade that will guide water toward the center of the bank and create a pool directly below the center of the structure.

To detect adverse effects associated with riprap to the channel or to fish habitat, noticeable increases in stream velocity, reduced lateral channel movement, reduction in riparian vegetation, LWD recruitment, and side channels. The small addition of riprap to the action area does not meet the criteria. The riprap will be placed under and near the bridge where riparian vegetation would have difficulty growing regardless of riprap placement. Root wads are incorporated into the riprap and the proposed project reduces existing channel constriction by setting the abutments further back from the banks than the existing bridge. The placement of riprap on the abutments is also minimized by the removal of existing riprap just upstream of the bridge.

The proposed project will have extensive effects on the present hydrology of the reach. Although artificial placement of rocks, riprap, and other bank hardening has been shown to adversely affect aquatic habitat on a local scale, the action area presently lacks habitat diversity. The action area presently lacks an adequate riparian forest and large woody debris. The banks in the action area are unstable and the stream will likely downcut or incise its banks. Without the bank stabilization structures described in this project, stream flow will continue to migrate away from the thalweg under the bridge and will create the need for future erosion control.

2.1.3.3 Effects on Critical Habitat

The proposed action will affect certain essential features of the MCR steelhead critical habitat. The NMFS designates critical habitat based on physical and biological features that are essential to each listed species. Essential features of designated critical habitat include stream substrate, water quality, water quantity, water temperature, water velocity, food, riparian vegetation, access, and safe passage conditions for fish. The proposed construction activities will affect water quality, water quantity, water velocity, water temperature, wetlands, and riparian vegetation. These effects are expected to be temporary and short term in nature.

All construction activities involving the bank, stream bed, and water column could cause short-term increases in turbidity. Noticeable turbidity plumes are only expected during and shortly after major in-water construction activities. These activities include but are not limited to installation and removal of the channel bypass, and re-introducing the flow into the original channel. Increased turbidity is not expected to be long-term.

The increase of 18,000 square feet of impervious surface in the action area is a nominal increase of impervious surface in the watershed. The incorporation of stormwater treatment facilities in this project adequately minimizes effects to local and watershed hydrology. Presently, no stormwater treatment is provided for the existing roads. Detention basins are designed to simulate pre-construction flows and will provide some infiltration and evapotranspiration. Annual precipitation for the past fifty years in the action area is less than 20 inches per year (WRCC 2001 in Hancock 2001). Disruption of peak flow and base flow conditions are not expected to be significant. Additionally, the widening of the bridge will increase the amount of overwater structure on Dry Creek. However, the structure is higher than the existing bridge and will have a small increase in unnatural shade than the existing bridge.

The removal of riparian vegetation will have a short term effect on salmonid habitat. Replanting disturbed areas with native trees and shrubs will improve the condition of the riparian habitat in the long-term, reducing, if not avoiding, the effects of the project. The proposed monitoring and maintenance for these replantings ensure long-term restoration of the disturbed riparian vegetation.

The short-term negative effects on water quality and macroinvertebrate communities will not have lasting effects. Long-term beneficial effects on critical habitat from the proposed action includes the removal of five piers from the stream channel and the removal of channel constriction. Replacing the old bridge with a longer two-span bridge would allow restoration of currently constricted flow.

2.1.4 Cumulative Effects

Cumulative effects are defined as “those effects of future state or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the federal action subject to consultation” (50 C.F.R 402.02). Future federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the ESA

In the action area for this project, agricultural activities are the main land use. Riparian buffers are not properly functioning, containing little woody vegetation. Agricultural practices leave little stream buffer width. The NMFS does not expect any further habitat degradation from agricultural practices. NMFS assumes that non-Federal land owners in those areas will also take steps to minimize or avoid land management practices that would result in the take of those species. Such actions are prohibited by section 9 of the ESA, and subject to the incidental take permitting process under section 10 of the ESA.

2.1.5 Conclusion

The proposed action is not likely to jeopardize the continued existence of MCR steelhead or result in the destruction or adverse modification of their designated critical habitat. The determination of no jeopardy was based on the following: 1) timing restrictions related to in-water construction are expected to minimize impacts to fish and their habitat, 2) riparian vegetation removal will be replaced at a 3:1 ratio, 3) replacement of a longer bridge should improve passage conditions for all life stages of salmonids and improve channel morphology, and 4) the installation of stormwater facilities will minimize the effects of increased impervious surface added to the Walla Walla watershed.

There will be short-term direct impacts associated with the proposed activities. The diversion of water, removal of fish from dewatered areas, the shortening of the river channel, and increased sediment levels will result in displacement of fish in Dry Creek. The direct and indirect effects will be minimized through the use of Best Management Practices in the design and construction. The bridge replacement will increase the amount of overwater structure above Dry Creek. However, unlike docks, the bridge is high above mean high water and are not considered limiting factors on Dry Creek. Overall, the proposed activities are not expected to appreciably reduce the likelihood of survival and recovery of MCR steelhead.

2.1.6 Reinitiation of Consultation

Consultation must be reinitiated if the amount or extent of taking specified in the Incidental Take Statement is exceeded, or is expected to be exceeded; new information reveals effects of the action may affect listed species in a way not previously considered; the action is modified in a way that causes an effect on listed species that was not previously considered; or, a new species is listed or critical habitat is designated that may be affected by the action (50 C.F.R § 402.16).

2.2 Incidental Take Statement

Section 9 of the ESA and Federal regulation pursuant to section 4 (d) of the Act prohibit the take of endangered and threatened species without special exemption. “Take” is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Harm is further defined as significant habitat modification or degradation that results in death or injury to listed species by “significantly impairing behavioral patterns such as breeding, spawning, rearing, migrating, feeding, and sheltering” (50 CFR § 222.102). Incidental take is take of listed animal species that results from, but is not the purpose of, the Federal agency or the applicant carrying out an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to, and not intended as part of, the agency action is not considered prohibited taking provided that such takings is in compliance with the terms and conditions of this incidental take statement.

An incidental take statement specifies the effects of any incidental taking of endangered or threatened species. It also provides reasonable and prudent measures that are necessary to minimize take and sets forth terms and conditions with which the action agency must comply to implement the reasonable and prudent measures.

2.2.1 Amount Or Extent of Take Anticipated

The proposed action is reasonably certain to result in incidental take through harm and harassment of juvenile and adult steelhead. The exact numerical extent of take is difficult to determine, and therefore has not been quantified. Instead, the extent of effects on habitat in the action area have been analyzed and Reasonable and Prudent Measures have been developed to minimize the extent of those effects. The mechanisms of take that are reasonably certain to occur during project activities include work in the water, temporary diversion of the creek, construction effects including sediment mobilization, vegetation removal, and hydrologic changes related to increased impervious surface.

2.2.2 Reasonable and Prudent Measures

The NMFS believes that the following reasonable and prudent measures are necessary and appropriate to minimize incidental take of MCR steelhead:

2.2.2.1 The FHWA shall minimize the extent of take from in-water work by limiting in-water construction to the time period between July 15 and September 30.

2.2.2.2 The FHWA shall minimize the extent of take during the dewatering and in-water work.

2.2.2.3 The FHWA shall minimize the extent of take that might arise from the diversion of the creek.

2.2.2.4 The FHWA shall minimize the extent of take by taking affirmative steps to avoid or minimize erosion and sediment delivery to water.

2.2.2.5 The FHWA shall minimize the extent of take that might arise from vegetation removal.

2.2.2.6 The FHWA shall minimize the extent of take associable with added impervious surface.

2.2.3 Terms and Conditions

To comply with ESA section 7 and be exempt from the prohibitions of ESA section 9, the FHWA must comply with the terms and conditions that implement the reasonable and prudent measures. There terms and conditions are non-discretionary.

2.2.3.1 To implement RPM #1 above, the FHWA or its representative shall ensure that in-water construction will be limited to July 15 through September 30.

2.2.3.2 To implement RPM #2 above, the FHWA or its representative shall comply with protective measures identified in the BA, the HPA, and this BO during in-water construction. FHWA must require the applicant to acquire the assistance of a WDFW fish biologist during dewatering to release fish. Those provisions are incorporated here by reference, as a Term and Condition of this Incidental Take Statement.

2.2.3.3 To implement RPM #3 above, the terms and conditions of the Hydraulic Project Approval and any other provisions outlined by WDFW biologists shall be followed regarding the size and installation of the temporary channel bypass. Those provisions are incorporated here by reference, as a Term and Condition of this Incidental Take Statement.

2.2.3.4 To implement RPM #4 above, the FHWA or its representative shall ensure that sediment controls are implemented and that conservation measures proposed by the applicant shall be fully implemented at the appropriate phase of construction. Those conservation measures are more fully described in the BA and associated correspondence, summarized in this BO, and are incorporated here by reference, as a Term and Condition of this Incidental Take Statement.

2.2.3.5 To implement RPM #5 above, the FHWA shall ensure that the applicant implements the monitoring measures for riparian revegetation described in this document and the BA. The monitoring measures described in those provisions are incorporated here by reference, as a Term and Condition of this Incidental Take Statement.

2.2.3.6 To implement RPM #6 above, the FHWA shall ensure the installation of stormwater facilities outlined in the BA and this BO are fully implemented. Furthermore, stormwater facilities shall undergo regular maintenance to ensure their effectiveness in preserving water quality and quantity. Those provisions as summarized in this BO are incorporated here by reference as a Term and Condition of this Incidental Take Statement. Walla Walla County shall be responsible for maintenance and monitoring of the detention basins after the facilities have been in operation for two years.

2.2.3.7 The FHWA shall send monitoring reports to document take during in-water construction (i.e., water diversion, culvert replacement, placement of rock weirs), following the format attached in Appendix I. The reports shall be submitted monthly beginning when the initial in-water construction activities commence until in-water construction activities cease. The reports shall be sent to National Marine Fisheries Service, 510 Desmond Drive SE, Suite 103, Lacey, WA 98503. Although fish kills are not expected to occur and are not authorized by this incidental take statement, the carcasses of any salmonids killed by the action shall be collected and frozen. NMFS shall be notified of the carcasses and delivered to NMFS to be identified at FHWA's expense when requested. The report and identification is critical in determining the extent of harm or kill by fish passage projects such as these and determining species occurrence in the action area. This provision is incorporated here by reference as a Term and Condition of this Incidental Take Statement.

3.0 MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT

3.1 Background

The Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), established procedures designed to identify, conserve, and enhance Essential Fish Habitat (EFH) for those species regulated under a Federal fisheries management plan. Pursuant to the MSA:

- Federal agencies must consult with NMFS on all actions, or proposed actions, authorized, funded, or undertaken by the agency, that may adversely affect EFH (§305(b)(2));
- NMFS must provide conservation recommendations for any Federal or State activity that may adversely affect EFH (§305(b)(4)(A));
- Federal agencies must provide a detailed response in writing to NMFS within 30 days after receiving EFH conservation recommendations. The response must include a description of measures proposed by the agency for avoiding, mitigating, or offsetting the impact of the activity on EFH. In the case of a response that is inconsistent with the conservation recommendations of NMFS, the Federal agency shall must explain its reasons for not following the recommendations (§305(b)(4)(B)).

EFH means those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (MSA §3). For the purpose of interpreting this definition of EFH: Waters include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where appropriate; substrate includes sediment, hard bottom, structures underlying the waters, and associated biological communities; necessary means the habitat required to support a sustainable fishery and the managed species' contribution to a healthy ecosystem; and "spawning, breeding, feeding, or growth to maturity" covers a species' full life cycle (50 CFR 600.110). Adverse effect means any impact which reduces quality and/or quantity of EFH, and may include direct (*e.g.*, contamination or physical disruption), indirect (*e.g.*, loss of prey or reduction in species fecundity), site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions (50 CFR 600.810).

EFH consultation with NMFS is required regarding any Federal agency action that may adversely affect EFH, including actions that occur outside EFH, such as certain upstream and upslope activities.

The objectives of this EFH consultation are to determine whether the proposed action would adversely affect designated EFH and to recommend conservation measures to avoid, minimize, or otherwise offset potential adverse effects to EFH.

3.2 Identification of EFH

Pursuant to the MSA the Pacific Fisheries Management Council (PFMC) has designated EFH for three species of federally-managed Pacific salmon: chinook (*Oncorhynchus tshawytscha*); coho (*O. kisutch*), and Puget Sound pink salmon (*O. gorbuscha*) (PFMC 1999). Freshwater EFH for Pacific salmon includes all those streams, lakes, ponds, wetlands, and other water bodies currently, or historically accessible to salmon in Washington, Oregon, Idaho, and California, except areas upstream of certain impassable man-made barriers (as identified by the PFMC 1999), and longstanding, naturally-impassable barriers (i.e., natural waterfalls in existence for several hundred years). Detailed descriptions and identifications of EFH for salmon are found in Appendix A to Amendment 14 to the Pacific Coast Salmon Plan (PFMC 1999). Assessment of potential adverse effects to these species' EFH from the proposed action is based, in part, on this information.

3.3 Proposed Actions

The proposed action and action area are detailed above in Sections 1.3 and 1.4 of this document. The action area includes habitats that have been designated as EFH for various life-history stages of chinook.

3.4 Effects of Proposed Actions

As described in detail in Section 2.1.3 of this document, the proposed action may result in detrimental short- and long-term impacts to a variety of habitat parameters. These adverse effects are:

> 3.4.1 Short term degradation of habitat due to dewatering of at least 180 linear feet of the wetted channel and diversion of river.
>
> 3.4.2 Short term degradation of water quality in the action area due to an increase in turbidity during in water construction.
>
> 3.4.3 Short term degradation of habitat due to removal of riparian trees and vegetation.
>
> 3.4.4 Long term change in fluvial morphology due to replacement of bridge, placement of riprap, rock weir, and bank stabilization.

3.5 Conclusion

NMFS believes that the proposed actions may adversely affect EFH for chinook salmon.

3.6 EFH Conservation Recommendations

Pursuant to Section 305(b)(4)(A) of the MSA, NMFS is required to provide EFH conservation recommendations to Federal agencies regarding actions that would adversely affect EFH. Because the conservation measures that the FHWA included as part of the proposed actions to address ESA concerns are also adequate to avoid, minimize, or otherwise offset potential adverse effects to chinook salmon to the maximum extent practicable, conservation recommendations are not necessary.

3.7 Statutory Response Requirement

Since NMFS is not providing conservation recommendations at this time, no 30-day response from the FHWA is required (MSA §305(b)(4)(B)).

3.8 Supplemental Consultation

The FHWA must reinitiate EFH consultation with NMFS if the proposed action is substantially revised in a manner that may adversely affect EFH, or if new information becomes available that affects the basis for NMFS' EFH conservation recommendations (50 CFR 600.920(k)).

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APPENDIX I
In-Water Construction Monitoring Report

In-Water Construction Monitoring Report
McInroes Bridge Replacement (NMFS WSB-01-372)

Start Date: _______________
End Date: _______________

Waterway: Dry Creek, Walla Walla County

Construction Activities:
____
____
____
____
____
____

Number of fish observed: ___________
Number of salmonid juveniles observed (what kind?): ___________________________________
Number of salmonid adults observed (what kind?):_____________________________________

What were fish observed doing prior to construction?____________________________________
____
____

What did the fish do during and after construction? ____________________________________
____
____
____
____

Number of fish stranded as a result of this activity: __________

How long were the fish stranded before captured and released to flowing water?
____
____
____

Number of fish were killed during this activity: __________

Send report to: National Marine Fisheries Service, Washington State Habitat Branch (WSB-01-372), 510 Desmond Drive SE, Suite 103, Lacey, Washington 98503